

REMARKS

Claims 1-26 are presented for examination. Claims 2-5, 7, 8, 11-14, 16 and 17 are found allowable subject to being rewritten in independent form.

Claims 19-27 have been rejected under 35 U.S.C. 101 because the Examiner found the claimed subject matter to be non-statutory. This rejection is respectfully traversed.

Independent claim 19 recites a radio reception program in a radio reception apparatus compatible with a plurality of modulation methods having different multi-value numbers, to have a computer execute the listed steps.

Accordingly, the claim recites a radio reception apparatus and a computer that execute the program. Therefore, the claim is clearly statutory.

Claims 1, 6, 9, 10, 15, 18, 19, and 24 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Uesugi (US patent 6,965,639).

This rejection is respectfully traversed for the following reasons.

In the application of a rejection under 35 U.S.C. §103, it is incumbent upon the Examiner to factually support a conclusion of obviousness. As stated in *Graham v. John Deere Co.* 383 U.S. 1, 13, 148 U.S.P.Q. 459, 465 (1966), obviousness under 35 U.S.C. §103 must be determined by considering (1) the scope and content of the prior art; (2) ascertaining the differences between the prior art and the claims in issue; and (3) resolving the level of ordinary skill in the pertinent art.

As demonstrated below, the Examiner has failed to properly consider these issues. In particular, independent claim 1 recites radio reception apparatus compatible with a plurality of modulation methods having different multi-value numbers, comprising:

- a measuring unit measuring an error vector corresponding to a distance between an original symbol point of a received signal and an actually received symbol point on an IQ coordinate plane;

- a comparing unit comparing said measured error vector with a prescribed threshold value; and

- a modulation method switching unit switching the modulation method in accordance with result of comparison by said comparing unit.

Independent method claim 10 recites a radio reception method in a radio reception apparatus compatible with a plurality of modulation methods having different multi-value numbers, comprising the steps of:

- measuring an error vector corresponding to a distance between an original symbol point of a received signal and an actually received symbol point on an IQ coordinate plane;

- comparing said measured error vector with a prescribed threshold value; and

- switching the modulation method in accordance with result of comparison by said comparing step.

Independent claim 19 recites a radio reception program in a radio reception apparatus compatible with a plurality of modulation methods having different multi-value numbers, to have a computer execute the steps similar to the steps of claim 10.

The Examiner considers the arrangement in FIG. 5 of Uesugi to correspond to the apparatus recited in claim 1. The Examiner admits that the reference does not disclose the claimed measuring unit that measures an error vector corresponding to a distance between an original symbol point of a received signal and an actually received symbol point on an IQ coordinate plane.

However, he takes the position that “determining the phase distribution or amplitude distribution of a symbol pattern of the received signal coinciding with distribution the symbol patterns (sic) would generate error vector.” Therefore, he concludes that the combination of sections 70-74 in FIG. 5 corresponds to the claimed measuring unit.

Considering the reference, the BPSK determining section 70 collects the phase or amplitude distribution information and determines whether this distribution coincides with distribution of BPSK symbol pattern. The QPSK determining section 71 determines whether the phase or amplitude distribution coincides with distribution of QPSK symbol pattern. The 8PSK, 16QAM and 64QAM determining sections 72, 73 and 74 compare the phase or amplitude distribution with the respective symbol patterns.

It is respectfully submitted that the reference provides no reason for one skilled in the art to conclude that the determining sections 70-74 measure an error vector corresponding to a distance between an original symbol point of a received signal and an actually received symbol point on an IQ coordinate plane, as claims 1, 10 and 19 require.

Further, the Examiner’s statement that determining the phase distribution or amplitude distribution would generate the claimed error vector is respectfully traversed. As one skilled in the art would realize the error vector recited in the claims does not need to be generated when phase or amplitude distribution is determined.

It is noted that if the Examiner relied upon common knowledge of the art or “well known” prior art without expressly indicating such reliance, the Examiner is respectfully requested to cite a reference in support of his position (see MPEP 2144.03).

As demonstrated above, the arrangement in FIG. 5 of the reference does not measure the error vector in the manner recited in the claims. Therefore, the reference cannot suggest comparing the error vector with a threshold value, as claims 1, 10 and 19 recite.

Also, the arrangement in FIG. 5 cannot switch the modulation method in accordance with result of comparison conducted in the claimed manner.

In addition, in rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to provide a reason why one having ordinary skill in the art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or inference in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. *Uniroyal, Inc. v. Rudkin-Wiley*, 837 F.2d 1044, 5 USPQ 2d 1434 (Fed. Cir. 1988); *Ashland Oil, Inc. v. Delta Resins & Refractories, Inc.*, 776 F.2d 281, 227 USPQ 657 (Fed. Cir. 1985); *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 221 USPQ 929 (Fed. Cir. 1984); *In re Sernaker*, 702 F.2d 989, 217 USPQ 1 (Fed. Cir. 1983).

This showing by the Examiner is an essential part of complying with the burden of presenting a *prima facie* case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992).

The Examiner has failed to provide the requisite reasons for modifying Uesugi to arrive at the claimed invention. Thus, the Examiner has failed to establish a *prima facie* case of obviousness.

Applicants, therefore, respectfully submit that the rejection of claims 1, 6, 9, 10, 15, 18, 19, and 24 under 35 U.S.C. 103(a) as being unpatentable over Uesugi is untenable and should be withdrawn.

Application No.: 10/618,617

In view of the foregoing, and in summary, claims 1-26 are considered to be in condition for allowance. Favorable reconsideration of this application is respectfully requested.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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